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Editorial Comment



THE ANNUAL RED CROSS ROLL CALL

THE annual roll call of the American Red Cross begins on November 11th, the anniversary of the end of the world's most disastrous war.

The first recorded instance of impersonal instinct of compassion and mercy in war is dated 1000 A. D. when Haldora the Dane, together with the women of her household sallied forth to dress the wounds of the warriors, friend and foe alike. The next recorded instance was in 1654 when the Knights Hospitallers organized volunteer war relief societies.

In the 19th century, Florence Nightingale, during the Crimean war, brought forward almost a perfect blossom of this altruistic ideal.

Later, Henry Dunant, the founder of the

Red Cross, gave his life and fortune to the same ideal. During our own Civil War, Clara Barton, who later became the first president of the American Red Cross, brought these ideals to our own battlefields.

Every physician should read Gumpert's "Life of Henry Dunant" and the Story of The Red Cross. Gumpert himself is a physician, and a German exile. Gumpert reviews the personalities and historical events which had so much to do with the awakening of humanitarianism in the 19th Century, and sharply contrasts that with the barbarism of the undeclared wars of today.

During the annual roll call this year, it behooves every American to take into consideration the dark outlook for peace. Peace cannot continue unless there is an about-face on the part of the totalitarian governments. With the whole world re-arming at a rapid pace, forcing our own country into this race, it should be clear that during all these preparations the Red Cross should be fully prepared to meet the catastrophe of war as it has always been able to meet the catastrophe of any other disaster.

The physicians of America hold an enviable position in relation to the Red Cross and, whenever possible, should take an active part in the assistance of their local chapters in making this annual roll call a success. C.M.H.

NOW WE HAVE REAL COOPERATION

THE following article was published recently in the Daily Newspaper of a small town.

"Doctors to Give Tests on Monday

"Tuberculin tests will be given boys and girls of high school age beginning at 10 o'clock Monday morning at the senior high school, according to announcement last night.

"The tests will be made at no expense to the parent by Dr. Elmer Highberger, Jr., M.D., medical director of Grand View Institution and by Dr. James A. Welty, school physicians, who have been authorized by the Venango County Medical Society to make the tests.

"They will be assisted by Mrs. Laura Schubert, school nurse and Miss Jean Taggart, executive secretary of the Venango County Tuberculosis Association.

"Giving of the tests will represent an instance of the cooperation of the family doctor, the Venango County Tuberculosis Association and the Venango County Medical Society.

"All reports will be sent to the family doctor, designated by the student. The family doctor will assume the responsibility of informing the parents of the results.

"The plan of testing is done in pursuance of the so-called Pennsylvania Plan for the control of tuberculosis, which has been initiated by the Committee on Tuberculosis of the Pennsylvania Medical Society and endorsed by the Pennsylvania Tuberculosis Association and the Secretary of Health.

Chief aim of the Pennsylvania Plan is to secure cooperation among the four agencies responsible for reduction in mortality from tuberculosis in the state, the family physician, the State Tuberculosis Association, the State Medical Society, and the State Department of Health."

This is an excellent example of What Organized Medicine can do for Public Health, and incidentally, it is what Organized Medicine must do if it is to remain Organized Medicine, and not be changed into State Medicine.

We must face facts. Unorganized doctors will never perform Tuberculosis Case Finding

Surveys and, without such surveys, Tuberculosis can never be eradicated.

Cooperation of organizations, lay and medical, is rapidly spreading throughout the United States. Where it is lacking, we have disgusting bickering instead of life saving early case finding.

F.W.B.

THE HEART IN TUBERCULOSIS AS we consider the patient with the diagnosis of his condition in mind and, later, the method or methods to be used in curing the tuberculous infection, we are, perhaps, too prone to consider only those parts in his body most likely to be directly affected by the disease. We find his lungs infected and immediately use every means possible to ascertain whether or not he has tuberculous enteritis, laryngitis, infected kidneys or bladder, epididymitis; in fact, anything which might complicate an uneventful recovery from his tuberculosis.

We find that he has a rapid pulse and becomes short of breath after even a small amount of exercise and we say that this is caused by his toxemia but, in far too many cases, we do not stop and consider the more immediate cause; myocarditis!

We find the case of pleurisy with effusion, dyspneic and cyanotic; as is the one with spontaneous pneumothorax or induced pneumothorax with a too flexible mediastinum, and we blame it on the fact that too much breathing space is thrown out of commission in too short a time. *This is not so!* We do, however, find that the heart and great vessels have been thrown out of their natural bed.

Later in the disease we encounter the case of fibroid phthisis in which the heart is displaced more gradually but none the less completely with the same result. In this type of case we also find the pulmonary circulation interfered with by cicatrization with a resulting right-sided hypertrophy and a later embarrassment.

Myocardial degeneration is found in all cases of long standing tuberculous infection, due most likely to the nutritional disturbances accompanying the disease, but a more acute myocarditis frequently present and overlooked is undoubtedly due to the constant presence of large doses of tuberculin coursing through the heart muscle. It must not be

overlooked that, since the heart muscle is the most active muscle in the human system, and, therefore, requires and gets a more generous blood supply than other muscle, that it is as a result going to suffer more quickly and more extensively from toxemia.

Sudden death following spontaneous pneumothorax is not due to suffocation or air hunger in most cases, but is due to the shock and insult to the heart and great vessels in a marked and rapid shift of the mediastinum.

Right-sided hypertrophy is gradual and due to a constantly increasing impediment to the blood flow through the lungs in fibroid tuberculosis. Right-sided failure is usually terminal in these cases, and is characterized by edema, ascites, and liver congestion.

Scar tissue formation with its attendant distortion and narrowing of the lung field on the affected side, pull the heart out of position, causing it to rotate on its axis with danger of partial closure of the coronaries near their openings in the aorta. This is more apt to occur in fibrosis of the left apex. The same result is encountered in the cirrhotic lung, so often encountered when a collapse therapy is discontinued, with a resulting partial atelectasis. We also find this happening occasionally in induced pneumothorax or in hydrothorax, due to displacement as a result of pressure.

In every case of tuberculosis where there is any evidence of cardiac involvement, a complete heart examination should be done. Frequently, early progressive damage to the myocardium can be halted—progressive distortion with resulting mediastinal displacement can be remedied by surgical procedure—more care can be observed in inducing pneumothorax—a more definite prognosis can be given in surgical procedures—exercise can be graded more carefully.

A very instructive and enlightening paper by Leverton in *Annals of Internal Medicine*, September, 1938, concludes with the statement, "The electrocardiogram is of value in the diagnosis of cardiac lesions associated with pulmonary tuberculosis. It is frequently the only positive evidence of myocardial disturbance."

R.H.H.

PHRENIC NERVE OPERATION

WHILE OPERATIONS on the phrenic nerve require skill and a knowledge of the local anatomical structures, the operation itself is relatively a simple one. It is done under local anesthesia, and there is little or no accompanying shock. The post-operative disability is of brief duration, usually requiring only 24 hours hospitalization. It has been performed in the doctor's office and even in the patient's bed room. For these reasons it is tempting to many to glibly advocate and perform surgery on the phrenic nerve without any profound consideration of the case. Such operations encompass cutting, crushing and extracting portions of the phrenic nerve, as it courses through the base of the neck.

Phrenic nerve surgery does not occupy today the exalted position of a few years ago, at which time it was on the ascendency. The pendulum is now swinging somewhat the other way. In the cold light of experience, and with further advances in collapse therapy, the procedure is being viewed more rationally, wisely and sanely, and with, subsequently, less fervor and enthusiasm. The trend seems to be definitely away from employing phrenic nerve interruption as a primary therapeutic mode; but rather as a supplement to other forms of lung collapse. The method, in itself, is not a curative one in by far the majority of instances. While in some cases brilliant results have been achieved, and will continue to be achieved by operations on the phrenic nerve as the sole or primary procedure, in the main, only disappointment will accrue.

Today, the consensus of opinion is that crushing the phrenic nerve, producing a temporary paralysis of the hemi-diaphragm, lasting six to twelve months, is the operation of choice. The nerve may be re-crushed as often as conditions indicate. The permanent diaphragmatic paralysis following the exeresis of a segment of the nerve, must be undertaken only after a most meticulous study of the case, and after prolonged and serious deliberation. It must not be forgotten that the diaphragm is probably the second most important muscle in the human body; and to permanently paralyze it must be ventured only after the utmost consideration.

C.H.H.

Treatment Of Empyema

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THE purpose of writing about the treatment of acute empyema is not to introduce anything new, but rather to emphasize the adequate early treatment so that it may not be prolonged for months or years into a state of chronic empyema.

Tuberculous empyema I will not discuss as it is a subject by itself, but rather the ordinary type of empyema caused by streptococcus, pneumococcus or, rarely, staphylococcus. This occurs most commonly following pneumonia, less often following abscess of the lung or trauma of the chest wall.

In the ordinary case of pneumonia, after the crisis has been reached and the patient seems about to recover, he becomes sick again and has the appearance of sepsis with a recurrence of fever. Physical examination will then disclose signs of fluid in the chest and its presence can be easily verified by simple aspiration.

In the early treatment of acute empyema, aspiration is the most important measure. The fluid found following pneumonia may be clear and sterile and, in some cases, disappears after aspiration and causes no more trouble. However, even when it is clear at the first aspiration it may, in later samples, contain pus and, as aspirations continue, become definitely purulent. The thin pus which at first occurs must be aspirated several times, usually every two or three days or oftener, until it becomes thick.

The purpose of repeated aspirations is to allow the formation of fibrin and a definite inflammatory reaction along the mediastinum which causes the mediastinum to become fixed. If the mediastinum is not fixed, opening of the chest in operation may cause a shifting of the mediastinum to the opposite side of the chest and embarrass the heart and respiration. This is particularly true if an open type of operation is used, where air enters freely and where, if the mediastinum is mobile it causes a definite air pressure on the operated side.

After the pus has become thick and filled with fibrin, an inflammatory reaction along

the mediastinum occurs which is sufficient to prevent the mediastinum from shifting when air is admitted to the chest.

The patient is then ready for operation, which is usually the removal of a small piece of rib. It is my experience that the chest should be opened at the lowest possible point in the pleural cavity. In the second place, a tube must be used for drainage which is large enough to prevent its becoming plugged by fibrin. This may, at times, happen even with a very large tube, but with a small tube a great deal of difficulty may be encountered due to plugging. In only one case have I found that the large tube which I used became plugged and had to be removed at least twice and cleaned. Nevertheless, we do see cases at times that may be drained with a small tube such as a catheter. This type of tube may be inserted between the ribs without resection. One such case of mine was a physician's wife who did not wish to have her rib cut and drainage was done by a catheter by means of keeping the tube very well cleaned out with frequent irrigations. Some years ago Alexander recommended two tubes for treatment of empyema, one for drainage, the other an interspace higher for instillation of irrigating solution.

A point which I should like to insist upon is that closed drainage should be instituted. By closed drainage, I believe we can assist the lung underlying the empyema to expand. The empyema cannot be entirely healed unless the lung re-expands entirely and becomes adherent to the chest wall. After this has occurred, there is no potential space in which another empyema can be formed. My principal reason for insisting on closed drainage is that I have seen quite a large number of cases of chronic empyema in which the lung had not re-expanded after open drainage and the patient therefore had been sick for a period of months to a period of years. In no case thus far have I seen the lung fail to expand fully and the empyema to remain healed after closed drainage, although in one case I was obliged to re-insert the tube once

because a small pocket remained where the lung had not become adherent.

Weinberg reported, in April at the Thoracic Surgery Association meeting, 40 or 50 cured cases of empyema drained by an intercostal incision, removal of the intercostal tissues and irrigation. In one or two of my cases of open drainage, I have noted the re-expansion of the lung, but my experience with chronic empyemas leads me still to insist on the use of closed drainage in the average case.

Although a number of tubes suitable for closed drainage are made I have used for about ten years the tube of Tudor Edwards of London which is so made that an inner flange resting upon the parietal pleura prevents the tube from slipping out and an outer flange can be attached to the skin of the chest wall. Within the cuff and next to the drainage tube is a small tube insert through which one may irrigate the chest if desired. In my use the drainage tube is attached to a long rubber hose which passes into a jar of sterile water on the floor by the bedside; the end of the tube resting beneath the level of the water so that air can pass from the chest and bubble out through the water, but no air can enter the tube from the outside because the end is beneath the level of the water. A small quantity of water is sucked up in the tube by the negative pressure of the chest and this in turn exerts a slight pressure on the air in the pleura and therefore tends to aid the lung to expand.

With this method of closed drainage I favor irrigation of the chest at first three or four times daily with salt solution. After the first day or two Dakin's solution may also be used, at first in small quantities and later freely. It may be that Dakin's solution does tend to cut down the formation of fibrin and thus prevent the tube from becoming blocked. At any rate, the irrigation does keep the tube free of fibrin. If irrigation is carried on through a single drainage tube, care must be taken not to over-distend the empyema pocket when injecting the solution. If a separate tube is used for irrigating, the over distention cannot occur. Irrigation is, of course, not absolutely essential to the treatment of empyema, but it does serve to remove pus more completely from the pleural surface and keep the fibrin well washed away so that

it may not plug the tube.

When drainage is well established the temperature should come to normal in a day or two and remain down as long as drainage is well established.

A simple complication of acute empyema is the presence of a small pneumothorax even when no abscess of the lung is present. Usually, this pneumothorax disappears when the opening in the lung which caused it closes, and this may occur with simple closed drainage. However, if the opening or bronchial fistula persists, thoracoplasty may eventually be necessary to close the empyema cavity. If there is an underlying abscess in the lung, drainage of the abscess or lobectomy may have to be done.

If the lung has not been fully re-expanded and if the visceral and parietal layers of the pleura have not come into complete apposition during the drainage of acute empyema, a condition of chronic empyema occurs. This may last for months or even for years. Occasionally such a chronic empyema may cure itself spontaneously by burrowing through the chest wall and draining to the outside, but this is rare.

At times chronic empyema may be cured by closed drainage. This, however, depends on the lung expanding so as to fill the chest. Usually the lung is bound down by thickened pleura and will not expand sufficiently. In these cases, if the empyema is not large, it may be cured by removing the chest wall, including the ribs, intercostal bundles and periosteum and parietal pleura over the empyema pockets; and allowing the defect to fill in by granulation tissue. If the empyema pocket is large, an unroofing of this type must be done and later the defect may have to be closed by some type of thoracoplasty.

One of the first cases of chronic empyema which I saw was that of a woman 25 years old who had had pneumonia followed by empyema 19 years before at the age of six. She was treated by tube drainage, but not completely healed, for in the intervening 19 years she had had six additional operations for the empyema which kept recurring. However, her chest wall was healed. She had been aspirated repeatedly during the two or three months prior to my seeing her. I did not in this case attempt closed drainage, but re-

moved the two or three ribs immediately over the pus pocket together with the parietal pleura, periosteum and intercostal bundles, leaving the pocket entirely exposed. The skin was sown to the edges of the parietal pleura where it had been cut. In a few weeks this pocket filled in by granulation tissue and eventually was covered by skin. The patient recovered entirely. However, she had suffered a great deal of illness during the 19 years and was left with a chest wall defect because of the fact that the empyema had not been completely drained and the lung expanded originally.

A man 50 years of age gave a history of empyema at the age of 18, which was treated by rib resection and either open or tube drainage. His chest wall healed after a period of time, but he was never in good health afterwards. About a year prior to the time I saw him, he began to have periods of fever followed by cough and expectoration of a large amount of purulent and greenish sputum. This would stop and after a few weeks or less he would again have fever with pain from which he would recover after a few days of cough and expectoration. At the time I saw him he had developed a superficial abscess in the left lower anterior chest wall. This was opened and bromopin injected. There was an extensive deformity of the chest, which I presume was caused by the long standing pleural infection. The chronic empyema cavity was protruded by the bromopin. This man also was treated by resection of the ribs overlying his empyema cavity and

by the removal of sheaths of calcified parietal pleura in addition to the periosteum and intercostal bundles.

A boy 21 years old with a history of empyema at the age of five gave a similar history. This boy was cured by unroofing of the empyema cavity and the granulating in of his pleural pocket. In this case I attempted to cure the condition by instituting closed drainage, but a small bronchial fistula was present which prevented the lung from expanding. The fistula healed after the empyema pocket was unroofed.

I could cite many similar cases of chronic empyema. The period following the original empyema varies from a few months to, in one case, thirty-two years. These chronic empyemas point ever so strongly to the need for early adequate drainage of acute empyemas of the pleura and re-expansion of the undiseased lung.

Summary

- 1 The treatment of non-tuberculous empyema is discussed.
- 2 The drainage site must be at the lowest point in the pleural cavity.
- 3 A large enough tube must be used to insure continuous drainage.
- 4 Closed drainage is to be preferred.
- 5 Irrigation is of some value.
- 6 Chronic empyema occurs when the lung has not been fully re-expanded during drainage of the acute empyema.
- 7 Chronic empyema may be cured by "unroofing" with or without some form of thoracoplasty.
- 8 Chronic empyema should be avoided by proper drainage of acute empyemas and re-expansion of the underlying lung.

Contract Let for Tuberculosis Hospital

At a meeting held on October 5th, the Board of Directors of the Arkansas State Tuberculosis Sanatorium let a contract for the construction of a main hospital building to be located at the State Sanatorium. The building, when completed, will have a bed capacity of 521 and will cost \$700,000. Dr. J. D. Riley, Governor of the American College of Chest Physicians for the State of Arkansas, is the medical director and superintendent of the sanatorium.

Koch Hospital to Obtain State Aid

The Robert Koch Hospital at St. Louis has submitted plans for a \$2,000,000 building program which will increase the capacity of the sanatorium from 550 to 1,000 beds. The plans also include new buildings for administration, nurses, and employees. The state laws allow for counties building sanatoria, \$12.50 per week for the support of each patient. St. Louis, which has the status of a county, has, up to the present time, paid the entire cost of maintaining the Koch Hospital.

Some Problems in the Early Diagnosis and Early Treatment of Pulmonary Tuberculosis

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THERE are two maxims to be applied in the early diagnosis and the early treatment of pulmonary tuberculosis. The first is that of the late Lawrason Brown: "The most important factor in diagnosis in the majority of cases of pulmonary tuberculosis is keeping the disease in mind." The second comes from Lord Lister: "For a physician there is only one rule: Put yourself in the patient's place."

One major cause of failure to achieve early diagnosis and subsequent early treatment is the neglect of the patient to consult a physician as soon as he or she becomes ill. The other major cause is the delay in establishing the diagnosis once tuberculosis is suspected. Educational programs sponsored by local, state and national medical organizations with physicians of recognized authority acting as spokesmen by means of the radio broadcast, the public address and the newspaper column, to inform the public of the methods of preventive medicine as applied to tuberculosis will help prevent this dangerous apathy. Physicians are becoming increasingly aware of the dangers attendant on procrastination in diagnosis.

An appraisal of the relative merits of the various diagnostic methods to be employed is of partial value. It is important to observe that the most painstaking physical examination is far inferior as a diagnostic aid to an adequate clinical history, considering the patient's past, family and personal histories in detail. Suspected cases in children and young adults should be tuberculin-tested by the Mantoux method with final concentrations of old tuberculin giving a dosage of 1 milligram, or with P.P.D. giving a dose of .005 milligrams. The results of the tuberculin test are to be considered simply as a positive or negative index of the presence of either a quiescent or active tuberculous infection. All positive reactors should be x-rayed. The roentgenograph and, particu-

larly, the stereoroentgenograph are to be preferred to fluoroscopy. Whenever it is possible, the readings should be made by a roentgenologist trained in tuberculosis or by a roentgenologist in collaboration with a physician or phthisiologist.

In those cases coming to the attention of the physician in the moderately advanced or advanced stages of the disease, which is the general experience, the most economical and most conclusive diagnostic test is an examination of a three-day specimen of the sputum for the tubercle bacillus. This is easily done in the physician's office. A single negative examination of the sputum is inconclusive. Repeated examinations of three-day specimens are to be recommended. Concentration of 5-30 cubic centimeters of the sputum of a three-day specimen by one of the common methods, i.e., the antiformin method, will increase the number of positive results by 25%. Guinea pigging the sputum will be necessary in occasional cases. Certain suspected cases of tuberculosis will require a period of observation that will include taking the temperature four times a day with the so-called minute thermometer in the mouth for at least five, preferably seven minutes. The diagnosis of tuberculosis is not entirely a laboratory problem.

Since every discovered case of tuberculosis is to be considered a contact case, the diagnostic problem is incomplete without a careful inquiry into the health of the patient's relatives and friends. Although the family vigorously objects to the idea that a focus of infection may exist within the family circle, they can be convinced by patient insistence on the part of the physician to readily cooperate in the tuberculin-testing of all contacts and subsequent x-raying of all positive reactors.

This is necessary, because the family is equally, or probably more willing to adopt the attitude of the physician, who, because of fear of alarming the group of friends and

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relatives, permits them to enjoy a false sense of security saying that since the open or diagnosed case of tuberculosis is removed from the household to a sanatorium or is placed under a regimen that prevents or mitigates the spread of the infection to those in the patient's environment, there is no danger. This attitude fosters a disregard of fatigue, loss of weight in adults or failure to gain weight in the case of children, fickle appetite, prolonged colds and coughs, attacks of chronic laryngitis, etc. The appearance of health is too readily accepted as a warranty of neglect. Elders in the family who are known to be chronic sufferers from 'bronchitis', 'asthma' or 'catarrh' are not suspected of being ill with pulmonary tuberculosis. A chronic cough is attributed to overindulgence in cigarettes. An acute debilitating illness is callously labelled 'influenza'. In all such matters the physician is the family's mentor.

Once the physician has arrived at a diagnosis of tuberculosis he must offer the patient an acceptable plan of treatment.

The question of sanatorium versus home treatment will be raised by the patient and must be solved by the physician. The treatment of tuberculosis during the important period following the diagnosis will be favorably influenced by sanatorium care since the patient will have a better opportunity to rest without the constant solicitations of worried relatives and friends. The sanatorium, in addition to being the most likely place where approved therapeutic methods are available under trained medical, surgical and nursing personnel, is to be considered a training school for patients. They will learn not only how to get well, but also how to stay well. Though the period of sanatorium care is abbreviated because of finances in the case of private institutions or shortened because of the long waiting lists of municipal, county and state institutions, this early period of instruction will provide the patients with a background satisfactory for continuing their treatment at home where they will be prepared to exercise precautions that will not only contribute to the restoration of their own health, but will also serve to prevent the spread of the disease to the healthy members of the household.

It might be of interest to mention that the

recent studies of Drolet have suggested: namely, that pneumothorax and other surgical methods, though serving to prevent the progress of the tuberculous process by lessening the chances of spread, are to be considered no adequate substitute for the complete physiological rest of long periods in bed. Even though 80% of the patients in sanatoria are still advanced cases, the regimen of the sanatorium offers the patients with the minimal lesion optimal conditions for permanent arrestment or cure.

Any plan of treatment must take into consideration the patient's eventual rehabilitation. At the present time, the various health resorts specializing in the treatment of tuberculosis are attempting to build teaching institutions that propose to divert the interests of the patients into channels that may prove profitable once their disease becomes arrested. It is for the advanced cases who live with the ever present hazard of a relapse that such a service is to prove of permanent benefit. Those early and moderately advanced cases that are promised the possibility of an arrested disease choose to return to their former fields of activity, if possible.

The increasing frequency of early diagnosis to be realized by close follow-up examinations of contacts will serve to augment the numbers of this latter group. Larger institutions offering teaching facilities to children so that their elementary education may not be neglected are increasing in number. Too much attention paid to the development of the patient's intellect and ambition frequently prolongs the period of treatment.

The physician is often faced with the problem of the refractory patient who refuses treatment when the diagnosis of tuberculosis is made and persists in working even though he is usually ignorant of the essential precautions to be taken in preventing the spread of the infection to his associates and contacts. Some communities have solved the problem by coercing the patient to accept hospitalization and segregation. This becomes very important where children are members of the household, or where the patient's work exposes children to the likelihood of infection.

Patients who cooperate in treatment and particularly those who frankly acknowledge the fact that they have tuberculosis are the

patients most likely to attain arrestment of their disease. The migratory patient who considers the freedom from responsibility, which the treatment of tuberculosis aims to promote as an opportunity for unrestrained wanderlust and who moves restlessly from institution to institution, has himself to blame for the progress of his disease.

The progressive sanatorium with an active

outpatient department can perform an important function in a community as an integrating agent collaborating with local, state and national medical organizations in publicizing facts about tuberculosis; in formulating and organizing local methods of tuberculosis control and treatment; and in serving as a teaching institution for the physicians in its vicinity.

An Observation on Pulmonary Tuberculosis When Complicated by Laryngeal Tuberculosis

A Preliminary Report

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THE picture of a far advanced pulmonary tuberculosis with tuberculous ulceration in and around the larynx as a complication is too familiar to warrant discussion. The patient who has had cavitation, cough, and positive sputum for many years often has the infection implanted on laryngeal structures finally. In addition to the pulmonary symptoms, he then has hoarseness, painful deglutition, a continuous "sore throat," and evidence, often, of more marked toxicity subjectively. Examination shows the characteristic findings of laryngeal tuberculosis in addition to the chest findings.

It is not our purpose to discuss this type of lesion in this preliminary report. We propose, however, to submit an observation which, as far as we can learn, has appeared very rarely in American literature.

Some years ago, one of us (S.C.D.) observed that there is a type of pulmonary tuberculosis which has a characteristic appearance on the x-ray film. The type with this characteristic appearance is almost invariably associated with a tuberculous involvement of the larynx. The roentgenogram is so characteristic that, when one is familiar with it, one suspects laryngeal involvement from the study of the chest film alone, and this suspicion proves correct in most instances.

More often than not, the patients with this

type of lesion present themselves for examination first because of throat symptoms, being unaware of any pulmonary disorder. They usually complain of sore throat or protracted hoarseness. The hoarseness often is not accompanied by pain and often there is no cough or sputum. Frequently there is no history suggestive of pulmonary disease. The suggestion of tuberculosis comes from the laryngologist, who sees the tuberculous lesion at his examination; and the roentgenogram shows shadows characteristic of the type of disease under discussion.

Description of this characteristic appearance of the roentgenogram is difficult. The lesion is almost always bilateral; there is, usually, a very fine generalized mottling, which is best described as having a "ground-glass" appearance. There is rarely definite cavitation. There is not the snow-flake appearance of the familiar acute exudative lesion, nor the strands and mottling of the proliferative type. The appearance is as though there were a lobar pneumonia with all its density erased and only the fine, diffuse network remaining. Observation of the films tells much more than verbal description possibly can, and is the only way in which the appearance can be appreciated.

We have long since believed that the best treatment of the old, well-recognized type is to direct attention primarily to the pulmonary lesion. This, of course, is best accom-

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plished by appropriate collapse therapy. The improvement in the throat is usually in direct proportion to the improvement in the chest. The foregoing is not true in the type of tuberculosis just described. From our experience we have gained the impression that collapse measures in these patients is contraindicated. While our series is too small to warrant any definite conclusions, we have found that the cases treated by collapse measures, and especially by pneumothorax, have done very badly. This, of course, must be considered together with the fact that prognosis in this type of case is very poor at best.

Brief histories of typical, representative cases will be presented with their x-rays.

Case No. 4847—Mrs. P. Age 44. First examined by us March 25, 1933. She had an acute cold, pleurisy and signs of pulmonary tuberculosis. X-ray showed minimal lesions of the type under discussion. (See in Fig. I.). She spent some two months on rest and improved very noticeably. Following this, she would not co-operate, and went about her duties as housewife. For the month before second examination (11-6-33), she developed painful throat, marked hoarseness, and dysphagia; also, more cough than usual, loss of weight and strength, and fever. On examination, her temperature was 100°, pulse 104, blood pressure 100/74. Patient poorly nourished, pale, very hoarse. Examination of chest: negative, without cough; after cough, showers of fine and medium rales throughout on right, apex to 4th interspace anteriorly and apex to lower border of scapula posteriorly on left. Larynx showed definite tuberculous ulceration. Sedimentation rate 113 mm. per hour. X-ray, at both examinations, was typical of tuberculosis that gives laryngeal lesions. She was given pneumothorax on right (December, 1933), with a good collapse, but grew progressively worse. The throat grew worse proportionately. She developed pleural fluid very rapidly, and aspiration failed to cause any improvement. Death followed on February 2, 1934.

Case No. A-1186—Mrs. G. Age 31. Seen by us November 14, 1934. Onset tuberculosis August, 1933. History uncertain as to onset of laryngeal disease. Course of pulmonary disease has been progressive. Examination of patient: temperature 99.6°, pulse 120, blood pressure 108/70. Pale, emaciated, hoarse.

Larynx showed tuberculous ulceration. Chest—fine and medium rales throughout both lung fields. Sedimentation rate 154. Condition grew progressively worse. Apparently had an acute exacerbation of lung condition on 2-25-35. She had temporary phrenic interruption on left on March 5, 1935. Her course was unsatisfactory, pulmonary and laryngeal lesions progressing. In April she returned to her home and no definite information regarding her condition is available. X-ray shows lesion which is typical of those found with tuberculous larynx (See Fig. II.). From it alone, tuberculous infection in the larynx was suspected before the larynx was examined.

Case No. A-731—Mr. W. Age 38. Seen by us October 23, 1934. Patient came to the clinic primarily for examination and treatment of his throat. Onset in 1931 with hoarseness. Diagnosis of tuberculous larynx was made and he was advised that he had practically no trouble in the lungs. This apparently was due to failure to recognize the markings of this type of lesion by x-ray when the disease was early. He was treated in a sanatorium nine months and discharged as cured. He went to work fourteen months after onset of disease. He worked eight months, when the hoarseness recurred, but he continued working for thirteen months more. He came to Arizona September 9, 1934, and began taking sun baths immediately. He was not aware of an increase in temperature following the sun baths, but stated that they made him feel worse. Examination of patient: temperature 99.4°, pulse 120, blood pressure 112/88. Patient emaciated. Chest—left lung: bronchovesicular breath sounds over upper portion with rales from 2d to 5th ribs anteriorly and suprascapular region posteriorly. Right lung: bronchovesicular breath sounds over upper portion. Rales from apex to 3d rib anteriorly and suprascapular region posteriorly. Examination of larynx showed a tuberculous ulcer below left vocal cord. Right vocal cord markedly edematous. Sedimentation rate 51. Sputum had been consistently negative for many months. Was positive in October, 1934. His course was consistently downward until he left for his home in Ohio in February, 1935. It was learned that he died during the year. X-ray film showed typical findings. (Fig. III.)

Comment

We have some thirty-odd cases in our series which show the type of roentgenogram we are discussing; from the thirty-odd cases, we have selected three which are considered representative. From these cases two facts appear evident. (1) Cases with these characteristic roentgenographic appearances have an associated tuberculous laryngeal lesion present in practically all instances. (2) These cases have an inherently bad prognosis, and they do so badly under collapse therapy that we believe collapse therapy may be contraindicated in this type of case.

The first fact was pointed out above. The diffuse, glazed appearance of the pathology in the x-ray film is, in itself, sufficient to make one suspect laryngeal involvement without knowing anything further about the

case.

We feel that we have seen a sufficient number of these cases to have gotten the impression that these patients do poorly under collapse therapy. They almost always die of progressing tuberculosis, regardless of treatment; and this outcome seems to be hastened by any form of collapse, especially pneumothorax.

In this preliminary report, we have made no attempt to explain the cause of this characteristic appearance of the roentgenogram, or the reason for the larynx being involved so frequently in cases presenting this type of chest film. It is to be hoped that this report will stimulate interest in the question and that others will look for these cases. We hope to submit a further report when more cases are available.



FIG. I. — Case 1.



FIG. II. — Case 2.



FIG. III. — Case 3.



P. W. A. Approves Grants for NEW TUBERCULOSIS BUILDINGS

Georgia State Sanatorium
Texas State Sanatorium
Jefferson County Sanatorium
Western N. C. State Sanatorium
Broadlawns Sanatorium
Julius Marks Sanatorium
Chambers County Sanatorium
Blue Ridge Sanatorium
Pinecrest Sanitarium
McRae Memorial Hospital

Alto, Georgia
Sanatorium, Texas
Birmingham, Alabama
Black Mountain, N. C.
Des Moines, Iowa
Lexington, Kentucky
Lafayette, Alabama
Charlottesville, Va.
Charleston, W. Va.
Alexander, Arkansas

Total Cost
\$387,000.
55,000.
154,000.
24,300.
150,000.
85,000.
50,000.
372,725.
200,000.
250,000.

A Resume of
The Treatment of Tuberculosis in the
Kerrville State Sanatorium for Negroes
Kerrville, Texas.*

H. Y. SWAYZE, M.D.**

Kerrville, Texas

DIFFERENT sanatoria have different ways of treatment, but as a whole the treatment is about the same, also the results. The patient in the sanatorium can be controlled much more easily than in the home because everyone is doing the same thing as a rule and under the same circumstances.

Bed rest, fresh air and good wholesome food is the foundation, together with proper observation and care. Our routine in regard to a new patient is to put him to bed and on the following day make an examination, unless there should be some good reason for putting it off. The reason we do not like to make the examination immediately upon entrance is that the patient has come into a new environment and is usually under a heavy strain. After he has been with us a few days the scare has left him and we try to find out all we can respecting his idiosyncrasies; as we doctors all know, the idiosyncrasies of the patient has a great deal to do with the treatment. After getting a full history from him, together with x-ray and physical examination, he is turned over to the technician for sputum, blood, urine and, quite often, a Kahn test. Often the patient is put to bed and kept there, if in our judgement he should be. Should the examination show only a moderately advanced tuberculosis, we allow him to come to the dining room for meals and by keeping in close touch with him, we can easily detect any changes for the worse and put him strictly to bed and keep him there until all untoward symptoms have subsided.

Our rest periods are from 9:00 a. m. until 11:00 a. m. and from 1:00 p. m. until 4:30 p. m. During this time he is not allowed to read,

write or talk and is instructed to keep as quiet as possible. Many put a dark cloth over their eyes while resting, which is a great help towards keeping them quiet. We do not allow windows closed until the weather is very severe. He soon learns to enjoy the fresh air after he has become accustomed to resting and sleeping in the open.

We feed all patients three times a day and at the same hours each day. We serve a balanced ration and milk is the foundation of all tuberculous patients, as without milk it is hard to keep the patient's weight up and, as a rule, as long as he is taking on flesh he is doing well. We do not allow eating in between meals unless the patient is very sick, we then put him on a soft diet, together with fruit juices and also allow him to take fruit after the night meal, provided he cares to. Should he be allowed to eat any time during the day, it would only be a short time before stomach troubles began; and the stomach is certainly a sheet anchor in treating tuberculosis. We do not use very much medicine in treating tuberculosis, although we are compelled to give quite a lot for other troubles, especially in constipation, pleurisy and other minor conditions that may arise.

Psychology goes a long way in keeping the patient's morale up and I am sure that without it we would have rather a hard time treating the disease. We try to keep the patient's confidence and always stand ready to take all the time it may require in explaining any questions the patient may ask. The patient should be told when he has tuberculosis although there is no need to tell him how much involvement there is. Neither should he be told how long it will take him to get well, for if you tell the patient he is in for six months or a few years, it is certainly bad for his morale. So its just as well to "straddle the fence" and as a rule he is satisfied.

In the treatment of hemoptysis, we keep

* Read before the Lone Star State Medical, Dental and Pharmaceutical Association at their State Meeting held June 14, 15 and 16, 1938.

** Superintendent and Medical Director of the Kerrville State Sanatorium for Negroes, Kerrville, Texas.

the patient quiet to the best of our ability. Should the hemorrhage only be light, we try to talk him into thinking all is well. Should it be quite large, we give by hypodermic $\frac{1}{4}$ gr. morphine, which is a great help in quieting the patient and also in checking the cough. Fibrogen subcutaneous and ice bag on chest and throat are used, but apparently all the benefit I have had with them is to quiet the patient. Artificial pneumothorax, provided there are not too many adhesions, is the only remedy that we have found that will absolutely check a hemorrhage.

Fever of tuberculous patients, as a rule, is easily controlled and it is not often that it annoys the patient to a very great extent. When it rises above a hundred, we give some antipyretic as often as is needed. An ice bag is also refreshing and allows the patient to rest better. Alcohol rubs at night are very refreshing to the far advanced cases.

Artificial pneumothorax is truly a boon to the tuberculous patient, as cases in which it can be used show wonderful results. We now have at the Kerrville State Sanatorium thirty five unilateral and two bilateral pneumothorax cases. When we find adhesions, we do a phrenicectomy and so far have gotten very

good results. With a bilateral pneumothorax, we try to collapse the lung with the most involvement first and if we are successful in the operation, in about two or three months, unless the opposite lung is improving nicely, we collapse it—but very gradually. If the operator keeps the bi-lateral case under close observation, all is well, but woe unto him who does not. While all pneumothorax patients do not develop fluid, a large percentage do and it has been our experience that it is better to let well enough alone and if no bad symptoms arise, we do not disturb, but only aspirate when necessary.

For cough we use the modern cough medicine, but are sometimes compelled to give codeine in large doses. We try to teach the patient to control cough and in many cases get good results.

When a patient's time has expired, or at any time that he sees fit to go home, I take him into the office where we can have plenty of time and instruct him in the way he should live, how he should eat, rest and exercise. Many seem to be glad to get the instructions and promise to carry them out. I hear from many of them and they tell me they are following the instructions given.

♦♦♦

The Meeting of Southern Tuberculosis Conference And Southern Sanatorium Association

The annual meeting of the Southern Tuberculosis Conference and Southern Sanatorium was held at the Brown Hotel in Louisville, Kentucky, September 19th to 21st. Both the medical and sociological sections were well attended and many excellent papers were presented.

In addition to its own membership, the Conference was fortunate in having at its meeting Dr. Irvin Abel, president of the American Medical Association; Dr. Chesley Bush, president of the National Tuberculosis Association; Dr. Kendall Emerson, Managing Director of the National Tuberculosis Association; and Dr. A. T. McCormack, Health Officer of Kentucky and president of the American Public Health Association, all of these gentlemen spoke, and spoke well.

It is difficult from a galaxy of excellent papers, the titles of which were printed in last month's issue of DISEASES OF THE CHEST, to select the outstanding features. Three widely divergent topics appealed most to this reviewer. Dr. John Alexander, of Ann Arbor, Michigan, gave a wonderful talk on "The Role of Lobectomy and

Pneumonectomy in Bronchiectasis and Carcinoma of the Lung." The lucidity of Dr. Alexander's presentation, the clear sequential logic of his argument, the carefully selected slides to illustrate his points, together with his personal charm in giving his talk, made it one of the most interesting discussions of the entire session.

The speech of Dr. Irvin Abel, president of the American Medical Association, was also intensely interesting, presenting as it did in crystallized form, the results of the deliberations of the call meeting of the House of Delegates to discuss the question of the Government's attitude toward the medical profession, and to take certain steps to get in harmony with Washington. From Dr. Abel's talk, it was evident that the A. M. A. had gone more than half way in meeting the wishes of the Federal Government and that much is to be expected toward the harmonization of government and medicine at the coming meeting between appointees from Washington and those from the A. M. A.

Charming in its originality was Dr. Lewis Moor-

(Continued to page 32)

Pneumolysis in the Treatment of Pulmonary Tuberculosis

LEO F. HALL, M.D., F.A.C.P.

State Park, South Carolina

CLOSED intrapleural pneumolysis is the surgical division of pleural adhesions under thoracoscopic observation or control. While intrapleural pneumolysis is not of itself a method of treating pulmonary tuberculosis directly, it is an aid in establishing adequate collapse of a diseased lung in which the objective of pneumothorax is being defeated by pleural adhesions.

The paramount objective of pneumothorax is collapse — adequate to produce localized rest, close cavities, prevent spread, reduce toxemia and expectoration. If adhesions prevent this "adequate collapse", it is here that closed intrapleural pneumolysis finds its usefulness. For by the division of adhesions, an inadequate collapse may be converted into adequate collapse, or the lung released from the thoracic cage.

Various authors estimate different percentages of divisible adhesions. One author states—"fifty per cent of pneumothorax cases have adhesions and fifty per cent of these are suitable for pneumolysis," while another author states—"when adhesions cannot be ruptured or stretched there remain about seven per cent of pneumothorax patients with isolated adhesions which are suitable for surgical division."

The Adhesions

The classification of pleural adhesions would be next to impossible since nature fashions them to suit herself and one may see strings, cords, bands, funnels, capstans, curtains, triangulars, rectangulars, etc. The fluoroscope and stereoscopic roentgenograms are the best pre-operative guides to the selection of what appears to be suitable or operable cases. However, not until the thoracoscope has been introduced into the chest and the surgeon has inspected the adhesions can he be certain as to their number, dimensions, locations, vascularity, attachment, size, or shape.

X-Ray

There should be sufficient pneumothorax space to permit the manipulation of instruments within the pleural space. Also, the adhesions must be long enough and small enough for division—that is, at least 2 cm. in length.

Indications

Pneumolysis is indicated where we find an inadequately compressed lesion or cavity, due to pleural adhesions, and not responding to pneumothorax or a phrenic operation. Another indication is adhesions which cause the patient to have hemoptysis, severe pain, or cough. And thirdly, adhesions producing tension upon a portion of the lung that previously contained an open cavity, point definitely to pneumolysis.

Contra-Indications

When, however, conditions such as rapid formation of temporary pleural effusions; adhesions shorter than 2 cm.; empyema, of a tuberculous or mixed pyogenic origin; progressive obliterative pleuritis; or tubercles on the pleura are found, pneumolysis should not be considered.

Instruments and Currents

Two general types of instruments are available for the operation:

- 1—The single puncture instrument, in which the telescope and cutting electrodes are included in the same instrument, so that the procedure can be carried out through a single puncture of the chest wall.
 - 2—The double puncture instrument, requiring two trocar punctures into the chest. One for the telescope and light carrier; the other for the cautery electrode.
- The two-puncture instruments in general make use of the Galvanic cautery, while the single puncture instruments use high

frequency current (Elector surgical). The two-puncture instrument is used by the author.

Preparation of the Patient and Pressure

On the afternoon before the operation, the chest and arm are scrubbed with soap and water, sponged off with alcohol and ether, painted with tincture of metrthiolate, and dressed with sterile towels. At the operation the procedure is repeated, except that soap and water are omitted. No breakfast should be given.

Anesthetic

While a few surgeons use general anesthesia, the majority of operators use an opiate combined with infiltration anesthesia for the introduction of the trocars.

We use 3 grains of sodium amytal (orally) two hours before operation; three grains, one hour before operation, 1-32 grain of dilaudid (hypodermically) thirty minutes before operation. A sufficient amount of 1/2% mety-cain is used to infiltrate the tissues and parietal pleura for introduction of the trocars.

The patient is usually placed on the back, slightly rotated to the non-operative side, with the head and upper part of the chest moderately elevated.

Introduction of Instruments after Draping Patient

The first trocar and cannula should be introduced on the anterior aspect of the chest in the second or third interspace, lateral to the compressed lung and below the adhesions to be severed. The introduction is simplified by a small skin incision just sufficient to admit the trocar. The cannula in place, the trocar removed, the light carrier is introduced, and then the telescope. The pleural cavity is inspected and adhesions studied for the proper place to introduce the second trocar and cannula. The site chosen can be transilluminated by the instrument within the chest and the cannula inserted, which is usually done in the axillary line, but is somewhat dependent upon the location of the adhesions.

Severance of Adhesions

The cord and band-like adhesions are usually most readily sectioned, particularly if

elongated. Extensive, broad, short or membranous adhesions whose appearance suggest that they may contain lung tissue, large blood vessels, or cavities, should be avoided and, if divided, only with extreme caution. When broad adhesions are attempted, multiple stages should be done. All adhesions should be divided close to the thoracic wall.

Narrow and long string-like adhesions are readily sectioned by applying the cutting edge of the cautery tip at the parietal insertion. The current is then switched on coagulating first, as indicated by a white color of the tissues, then readily severed. The cautery should remain still during the process, allowing the adhesion to cut itself by tension, complete coagulation and absolute hemostasis are thus insured. For the larger adhesions the flat surface of the cautery tip is first applied and the adhesion coagulated, the blade is then rotated so as to apply the cutting edge. This being repeated as many times as necessary to complete the section.

In large fan-like adhesions, an incision is made around the parietal insertion with the heated cautery. The current is then turned off and the lung gradually and cautiously dissected away from the chest wall, by following the line of cleavage. When the lung is sufficiently dissected, the current is switched on and the pleural layer incised. This is known as Dr. Coryllos' cold cautery technique.

The instruments and trocars removed, the skin is closed by clips, skin massaged one minute and dressed with rubber sponge. The pressure within the pleural cavity should be kept slightly positive or neutral for several days.

Following the operation almost all cases develop a slight subcutaneous emphysema and some pleural effusion, both of which usually disappear. A few develop empyema, tuberculous or of mixed types. Pleural shock has occurred and two of the greatest dangers are the opening of a large blood vessel or pulmonary tissue.

The incidence of serious post operative complications is almost in direct ratio to the shortness of the adhesions divided and in inverse ratio to the experience, skill and patience of the surgeon. The greater proportion of short, broad adhesions one undertakes to divide the greater will be the incidence of

serious complications. The results of the operation are therefore somewhat dependent upon the selection of suitable cases.

The mortality from the procedures is 1% in 2000 cases studied. The advantages of the operation are simply those of effective artificial pneumothorax, shortening the period of ineffective treatment. When properly performed the operation is painless and does not usually produce shock. Should the patient complain of pain, the adhesion may be infil-

trated with metycain.

The operation, while simple, is not without potential danger, requiring effort, time, and patience on the part of the surgeon, with co-operation by the patient. It should be used when the simpler methods fail. The successive use of different collapse therapy procedures, when necessary, rather than limitation of treatment to a predetermined single minor or major operation, result in the highest percentage of arrested cases of tuberculosis.

Bibliography: Collapse Therapy of Pulmonary Tuberculosis, John Alexander, Ann Arbor, Michigan "Journal on Diseases of the Chest"

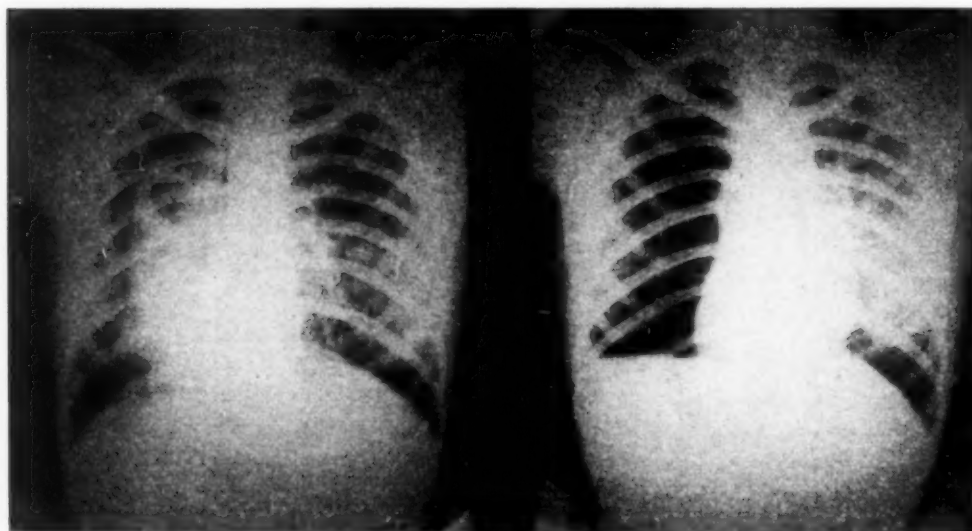


Fig. I. Before operation

Fig. II. After operation

ACCEPTANCE FROM THE PHILIPPINE ISLANDS COMPLETES GOVERNORS FOR COLLEGE

With the acceptance from Dr. Miguel Cañizares, elected Governor of the American College of Chest Physicians for the Philippine Islands, we announce the completion of the organization in the 44 states wherein the College has elected Governors, the District of Columbia, Porto Rico, Hawaii, Mexico, and the Philippine Islands.

We are publishing the letter which has recently come from the Philippine Islands as representative of the fine spirit with which the Governors of the College are taking hold of their responsibilities. The officers of the College have mapped out an ambitious program for this coming year, and the committees in charge of the program are calling upon the Governors of the College to assist them in carrying out their part of the program. The Governors are responding wholeheartedly to the requests of the committees and through this fine organization much will be accomplished.

August 25, 1938

Dr. Champ H. Holmes, President
American College of Chest Physicians
Atlanta, Georgia

My dear Dr. Holmes:

I have on hand yours of July 11, 1938 advising me that the American College of Chest Physicians has done me the singular honour of electing me Governor of the College for the Philippine Islands up to December of 1940. Allow me to express through your good office my gratitude for this great honour the College has bestowed upon me.

Carrying as it does great responsibilities, I shall attempt to discharge them to the best of my ability and to carry out the principles and ideals on which the College was founded.

Very sincerely yours,
MIGUEL CAÑIZARES,
Quezón Institute, Philippines

Recognition of Early Pulmonary Tuberculosis in Industry*

JAMES A. BRITTON, M.D.

Chicago, Illinois

THE important community health problems are, incidentally, the important health problems of industry. This applies particularly to pulmonary tuberculosis. While there has been a marked reduction in the importance of the tuberculosis problem, both for industry and the community, in the last 30 years, it still retains its importance from the standpoint of disabilities which are long and serious. Thirty years ago there was little or no provision for discovering or caring for tuberculous individuals. There were no clinics, there were no sanatoria, nor was there routine physical examination for any purpose and particularly that for employment. The practice of making routine physical examinations only applied to a few such selected occupations as train service on railroads and for service in the army or navy.

Without attempting to evaluate the various factors which have entered into the reduction of the death rate from tuberculosis in Illinois in the last half century from 250 or more per hundred thousand to less than 60 per hundred thousand, we do know that our knowledge of the situation and our management of cases is greatly improved. At the beginning of the Twentieth century records available seemed to indicate that the incidence of tuberculosis among those employed in industry was approximately the same as that of the community. While the community death rate in Illinois from pulmonary tuberculosis is something less than 60 per hundred thousand at the present time, the tuberculosis death rate in many of our large industrial groups is less than one-fourth that of the community rate. The case rate of tuberculosis in industry is only slightly in excess of the death rate in the community. In recent studies made of large industrial groups, the death rate from pulmonary tu-

berculosis during the year 1937 was 14 per hundred thousand. The incidence during this same period, of known cases of pulmonary tuberculosis, was 80 per hundred thousand.

These figures correspond very closely to the general conception of those who have studied the tuberculosis problem, that for every known death from pulmonary tuberculosis there are from five to seven active cases in the community. It seems, then, that while we still have the problem of pulmonary tuberculosis among those employed in industrial establishments, the problem is not nearly so great as it was 30 years ago and that there has been a very definite change for the better by reducing the industrial rate from approximately equal to that of the community rate to less than one-fourth of the community rate.

Because of the fact that a lot of loose statements have been made regarding the unfavorable relation between employment in industry as such and the unfavorable effect upon the tuberculosis rate, it might not be out of place again to repeat statistics regarding the change in the tuberculosis death rate in large industrial centers. It might be well to note especially in this connection that the reduction in these large industrial centers in the tuberculosis rate has been more rapid than that in the states in which the industrial centers are located.

TUBERCULOSIS MORTALITY PER HUNDRED THOUSAND

	1900		1930	
			City	State
City				
Louisville	211.5	60.2		108
Chicago	157.8	56.9		74
St. Louis	196.3	59.1		83
Detroit	113.0	68.5		68
Pittsburgh	133.7	57.7		69

*Read before the Nineteenth Annual Meeting of the Central States Society of Industrial Medicine and Surgery, Springfield, Illinois, May 17, 1938.—Reprinted from *Industrial Medicine*, Vol. 7, No. 6, June, 1938.

Five years ago there was great excitement in this country about silicosis and silico-tuberculosis. At a public meeting in Washing-

ton two years ago no less a person than the Honorable Secretary of Labor stated in public that an investigation made for the Department of Labor had shown that at least 500,000 people in the United States were about to become disabled or were going to die of silicosis or silico-tuberculosis. The civil courts were being flooded with damage claims numbering thousands of cases and aggregating claims of millions of dollars for compensation. Since this hysterical period many health surveys have been made by competent authority. Recent statistics of thorough and careful surveys, at which time adequate x-ray chest plates have been made, in places like Chicago, Milwaukee, and more recently in New York State, show conclusively that while there are certain occupations in which silicosis may be produced and silicosis or silico-tuberculosis result in disability or death, the number of workmen involved and the number of jobs with serious potential hazards are very much smaller than was thought even two years ago. A survey of a large group of factory employees in Chicago was recently made. A large percentage of all those examined had been, or were, occupied in the so-called dusty trades. Counting everything that could be possibly interpreted as some evidence of lung change due to dust exposure, either clinical or x-ray, or both, counting every stage from earliest to the most advanced, the total number found of any degree, irrespective of whether there was disability or not, was less than 2%.

Beginning about 25 years ago, some of the larger industrial establishments started to examine applicants for employment before they were assigned to jobs. The fundamental purpose of this pre-employment examination was to assist in the choice of a man physically qualified for the particular job which he wished to do. Shortly after this pre-employment examination was established the practice of making periodic examinations of those already employed was also established. Following the lead of those who started this work 25 years ago it has become almost a universal practice in all except the smaller industrial establishments to more or less regularly carry out these two procedures. Within the last year or two these examinations have been made much more carefully than was previ-

ously done. The usual type of examination at the present time includes not only urinalysis and blood pressure, but also an x-ray chest plate. Needless to say, with the improvement in technique, the work now is much more accurate and satisfactory.

There has been considerable discussion about these physical examinations, both on the part of management and labor, and in some places objections have been raised to making any physical examinations at all. The objectors very frankly stated that they thought the theory of these examinations was excellent, but in some places these examinations were used for some other purpose than determining physical and mental fitness and because of this applicants for employment and those already employed were unfairly treated. The subject of mental "fitness" was broadened into mental "attitude"—attitude as exemplified by religion, politics and trade unionism. The obvious comment is that any physical examination that is made must, *first*, be well done and, *second*, the doctor making this examination must not abuse his privilege nor allow the knowledge of the man who is seeking employment or who is already employed to characterize this work or it cannot continue.

There are two or three interesting points in the plan of procedure in making physical examinations. It is a well known fact that wherever there is a rapid increase in the number of employees of an industrial establishment, due to the pressure of increasing business, it regularly happens that a considerable percentage of those put to work, subsequently, within the next few days drop out because they do not like the work or because they or the employer find they are not qualified for the job which the employment department thought they were. It has been argued that there is a large amount of wasted effort in making pre-employment examinations of everyone before they actually go to work. In fact it has been the practice in some industries to wait a few days or a month or so before making this examination, the argument being that if the plant physician waits this short interval he only has to examine those where it is reasonably certain that they will remain on the job.

It is my personal opinion that such a pre-

cedure is not fair either to the employee or to the management. It is very embarrassing and frequently the subject of considerable argument, if a man has been allowed to work a few days or a month, finds that he likes the job and can perform it to the satisfaction of his foreman, and then is physically examined and it is found that he has some physical defect or disease which disqualifies him for employment. It is believed that reasons for rejection are hard enough "to take" under any circumstances, and that in fairness to the man he should be told before he actually goes to work, whether or not he is physically qualified.

The plan of periodic physical examination of those already employed has been the subject of a great many comments. Without going into an elaborate argument about the reasons for the plan, my personal opinion is that all employees, whether they are executives or common laborers, should have a complete examination no less often than once in three years. Supplementing this, those who are in responsible positions, those who manage or direct others, should be examined at least once a year. Then in addition to this, all employees who are subjected to a known occupational hazard of any degree should be examined more often than once a year. If employees are subjected to a known poison, then according to some of the state laws, it is necessary to check the physical condition of this group once a month. In a word then, the schedule of examination should be, *first*, everybody at least once in three years; *second*, those in responsible positions once a year; *third*, those who are subjected to occupational hazards of any degree, frequently enough to keep a constant check on the effect of the exposure.

As previously stated, records of disability and death, because of tuberculosis, in large groups of industrial employees, have shown a disability rate of about 80 per hundred thousand and a death rate of 14 per hundred thousand employees. This does not include those who have evidence of tuberculosis, either old or recent, but who have not as yet developed disability. On careful examination, including chest x-ray, of large numbers of those applying for work, there were some

clinical or x-ray signs of pulmonary tuberculosis in 2.4%; of those already employed there were clinical or x-ray signs of tuberculosis, but no symptoms, in 1.9%.

If we compare the cases where there is a clinically active pulmonary tuberculosis with the number which are found to be working who have x-ray or physical signs of some inactive tuberculosis, we find that for every clinically active case there are 25 who are regularly working and in spite of having x-ray or physical evidence of some old pulmonary tuberculosis they do not have any evidence of active disease. Experience has shown that only a very few of those of this group who are classified as having x-ray signs of some pulmonary tuberculosis, as discovered in this type of routine periodic examination, ever developed an active pulmonary tuberculosis. This fact is very important because there has been an outspoken opinion on the part of many managers, on the part of some industrial physicians and even fellow employees, that if tuberculosis is discovered in such an x-ray examination sooner or later active tuberculosis will develop and such an individual is always a potential hazard. Such an attitude has resulted disastrously for a good many men who are well placed and working well within their physical limits. This phthisiophobia should have prayerful consideration wherever a group of industrial physicians are gathered together. We must learn to distinguish between the man who has active pulmonary tuberculosis with positive sputum, an active pulmonary tuberculosis but without positive sputum, and "x-ray" pulmonary tuberculosis where the individual is in good physical condition and working at a job which means the difference between economic independence and insecurity. As physicians, irrespective of whether we have any interest in industrial work, we should ever keep in mind that the best preventive for tuberculosis is a regular job in a fairly decent working place with a regular pay check and the possibility of a decent place to live and regular meals.

The disposition of the cases of tuberculosis—speaking of them in the all-inclusive term—whether active, quiescent, or entirely asymptomatic, should be given careful thought. I think we all can agree that where a man has an active tuberculosis with a posi-

tive sputum, he is a sick individual and should not be passed as an applicant for any job, and if he is employed he should stop work both for his own sake and for the safety of fellow workmen. An applicant, who from physical examination and x-ray is thought to have a tuberculosis which is not completely arrested, even if there is a negative sputum, should usually be placed in the same classification as the proved active case. A man who is employed, however, may frequently be allowed to work under supervision at his usual occupation, or some modification of his usual occupation, without endangering his own safety or that of his fellows. An applicant who has an old inactive tuberculosis should not always be rejected for employment. Many such individuals can work at some self-supporting occupation with considerable benefit to themselves, their families and the community. Such an individual, however, should not be given employment which calls for excessive muscular effort nor should he be employed where he is exposed to a known occupational hazard. If such an individual is already employed and he has demonstrated that he is able to remain without symptoms at his usual occupation, it is seldom if ever necessary to disturb him unless he is in a known hazardous occupation in which it might be possible for his old, latent disease to become reactivated by continued occupational exposure.

We now come to the problem of the employee who was compelled to quit work because of active tuberculosis and after a period of effective treatment at home or in a sanatorium is now ready to return to some regular work. It used to be taught that such an individual should only work out of doors—should seek an occupation in which he was more or less constantly in the open air. This idea is usually absurd, and most often it results in subsequent breakdown of the individual. If one stops to think, the exposure to the weather with the frequent and sudden changes in temperature and humidity and the laborious character of the work usually available in an outside job—the combination is anything but a satisfactory one for the tuberculous individual. The old cry used to be for a light outside job. Observation has shown that about the only light thing about an out-

side job is the pay. The experience of all of us who have dealt with cases of tuberculosis for years has been that the returned tuberculosis case does better at the job which he knows; the job for which he has been trained, possibly by long years of experience, the one that he does with the least effort and, incidentally, pays him the best wages. It is possible that his old job must be modified somewhat, but in view of modern standards of hours per day and days per week we must not fail to remember that the time off duty each day is usually 16 hours, and in addition to this there are usually two full days each week in which there is no work.

This should convince us that unless there is something inherently wrong with the old job the ex-sanatorium patient, if he is able to work at all, can get by very well if he limits his activities to the working hours alone. Various attempts all over the country have been made to return the individual with an arrested tuberculosis to an especially selected job. All sorts of attempts have been made in various parts of the country and most of them have not proved very satisfactory.

On the other hand, it is true that any doctor who is familiar with the problem finds that he has quite a large percentage of the returned cases going along very well, year after year, on their old jobs.

If we wish to understand all the factors incident to the tuberculosis problem in industry we must not forget the determining factors in the development of any case of tuberculosis, under any circumstances. In spite of the fact that there is some evidence that adults occasionally acquire a primary infection after reaching adult life, it is still true that the great majority of all positive cases of pulmonary tuberculosis can be traced back to exposure in childhood. It is still true that in 100 consecutive cases of active pulmonary tuberculosis there is a positive history, in at least 50% of the cases of a direct exposure to a tuberculous mother, father, brother, sister, or some adult in the immediate family. We must not forget that living and personal habits have a great influence in determining whether or not a comparatively slight, old, latent infection becomes reactivated. We must also remember that working habits, not the working place or the occupa-

tion, have an important bearing. For example, in our medical schools the tuberculosis rate among students who have been carefully selected, is much higher than that in the community. The explanation for this high rate among medical students is not that they have any unusual exposure in their classrooms or in their clinics, but modern educational practices in this field are so intense that medical students habitually, and over a long period of months and years, fail to get the adequate rest that young individuals require. There are very few jobs in which there is an exposure that is directly responsible for the activation of a tuberculosis, but most any job might be the determining factor. It is not the job itself, but the way that it is done that is important.

We have had a great deal of publicity on the question of industrial exposure as the determining factor in the development of tuberculosis. There has been a lot of "scare-head" publicity as to the enormous numbers of men who are subjected to such an exposure. Sober thought and careful investigation have shown that the importance of this type of industrial disease exposure has been greatly over-estimated.

Perhaps the outstanding factor in the development of tuberculosis is the economic status of the individual or his family. If a group of individuals have fairly decent jobs and work under fairly sanitary conditions and get a fair regular wage, it means that the majority of the individuals in this group will live regular lives in decent surroundings and their food, clothing and shelter are adequate. A group of individuals such as this usually has a very low tuberculosis rate, irrespective of the type of industry at which they are employed. If, on the other hand, a job is irregular, the working place is not very sanitary and the pay is the minimum, any group, depending on such jobs for a livelihood is bound to live poorly in unsatisfactory surroundings. We use the words susceptible and immune and yet no one knows exactly what susceptibility or immunity is. We ordinarily think of the colored race as being especially

susceptible to tuberculosis. This is possibly true, but only in a measure. The most important factor in this race susceptibility is that such individuals are at the bottom of the economic scale and jobs are irregular and the pay poor. They live miserably, and all of the problems incident to health because of such living are emphasized. Even the so-called more immune will have a high tuberculosis rate under like circumstances.

I suppose all of you have been tremendously interested in Drolet's paper in the *American Review of Tuberculosis* for February, 1938, on the trends in tuberculosis. He shows by very comprehensive statistics for this country and England that the trend in the incidence of tuberculosis has been steadily downward. This means that the problem of tuberculosis in industry and in the country as a whole is gradually becoming less of a problem, and that in the future it will not be as difficult as it was in the past. Incidentally, however, in his paper he shows conclusively that where there are bona fide cases of active tuberculosis the results of treatment, irrespective of where or how, have not been very satisfactory. In other words, the hopeful sign is steady reduction in the number of cases and not what happens to those who actually develop the disease. Progress has come by prevention and not through treatment. The problem today is still important, but no longer of major importance. Any industry that has a trained medical staff and a fairly comprehensive plan for medical supervision can expect a steadily decreasing tuberculosis rate. The enormous number of routine chest plates that are being taken at the present time allow us to judge the relative importance of individual cases and the value of the contributory factors in the development of tuberculosis and how best to modify or control these factors. Knowledge of how to prevent tuberculosis in industry has come through persistent study of the employees and working places and their occupational hazards. The job is not yet finished, our methods of elimination and control have proved satisfactory; they should be continued.

Tuberculosis Program

Convention of Pennsylvania State Medical Society

SCRANTON, PENNSYLVANIA

THURSDAY, October 6th, was Tuberculosis Day at the Convention of the Medical Society of the State of Pennsylvania.

Doctor Julius L. Wilson, formerly associated with Doctor Soper of New Haven, and recently appointed head of the Department of Thoracic Diseases of Tulane University, presented Pathology, Symptoms, and Diagnosis of Pulmonary Tuberculosis, followed by a discussion of the Treatment of Pulmonary Tuberculosis by Doctor Frank Walton Burge, of Philadelphia. Lantern slides of Pneumoperitoneum were shown.

Following the lectures, a Tuberculosis Round Table was held. Round Table discussions were inaugurated this year for the first time in the history of the Scientific Programs of the Medical Societies of the State of Pennsylvania by Doctor Seth A. Brumm, of Philadelphia, Chairman of Scientific Programs. The Tuberculosis Round Table officials were: Doctors Julius L. Wilson, Frank Walton Burge, Joseph W. Post (x-ray), Esmond R. Long (Pathology, Case Findings), and W. Emory Burnett (Chest Surgery). Questions from the ninety physicians attending the Round Table were answered directly as they were presented. The questions were excellent and pertinent, and the Round Table was generally and enthusiastically hailed as the best method of presentation of medical material.

In the afternoon, the Pennsylvania Tuberculosis Society held its semi-annual Board Meeting, thereby bringing to Scranton important persons in Tuberculosis Work from all over the State, and so greatly helping toward the success of "Tuberculosis Day" in the Medical Society Convention. Arthur M. Dewees, the able and progressive Executive Secretary of the Pennsylvania Tuberculosis Society, in arranging his Board Meeting at that time, gave his usual fine example of cooperation with and encouragement of, all Tuberculosis Agencies.

In the evening, a Tuberculosis Dinner was held under the auspices of the Tuberculosis Committee of the Medical Society of the State of Pennsylvania. Gathered at the dinner were the officials of the Pennsylvania Medical Societies, both Old School and Homeopathic; the Secretary of Health of the Commonwealth of Pennsylvania, Doctor Edith MacBride Dexter, and a number of her

leading Tuberculosis Officials; the President of the Pennsylvania Tuberculosis Society, Doctor William Devitt, and a number of other officials of that Society; Doctor Champneys H. Holmes, President of the American College of Chest Physicians, and many of the Fellows of the College, were present.

Doctor Louis Clerf, Professor of Bronchoscopy of the Jefferson Medical College, was Toastmaster; any dinner would be a success with Louis Clerf Toastmaster. The speeches were all on the Pennsylvania Plan. It was universally endorsed. Doctor Dexter said it was no longer just a Plan—that the State Health Department was building homes for doctors on the sanatorium grounds, raising the Tuberculosis Sanatorium doctors' pay, doing away with patient labor in the sanatoria, as rapidly as possible, and building the finest sanatorium buildings any State has ever had.

Doctor Champneys H. Holmes of Atlanta, Georgia, brought encouraging news of the spread of the Pennsylvania Plan in many other States. His heart was so in his theme that his speech was generally acclaimed "The finest oratory we have ever heard." He stated that Doctor Ralph Matson of Portland, Oregon, was leading the movement throughout the Country.

Doctor Esmond R. Long, gave words of deepest wisdom, lauded the Pennsylvania Plan, and called attention to one very important lack in the Plan, which is its failure to stress the importance of Case Finding Surveys in older age groups where the incidence is known to be high. He said, "Look for Tuberculosis where it is to be found." We will incorporate the above as ~~wisely~~ ^{wisely}.

Mr. Arthur M. Dewees brought a new plan of cooperation between the Pennsylvania Tuberculosis Society and the State Medical Society. "In the future," he said, "we will invite the Chairman of the State Society Tuberculosis Committee to be present at our Board Meetings."

Thus, is the Pennsylvania Plan, first endorsed by The American College of Chest Physicians, amalgamating Public Health Officials, The Great National Tuberculosis Association and its component societies, and the Forces within Organized Medicine, into one great Army, to give new battle to the White Plague.

The Attitude of the States to the Pennsylvania Plan*

CHAMP H. HOLMES, M.D. **

Atlanta, Georgia

IN the good office of president of the American College of Chest Physicians, I share with your commonwealth the pride of this notable undertaking; for the College is a co-sponsor of the Pennsylvania Plan. Dr. Frank Walton Burge has referred to it as the American College of Chest Physician's Plan. Under the warmth and shelter of its maternal wings, the idea has been fostered, nurtured and incubated. It is now emerging as a chrysalis from the pupa stage to wing its way into the sunlight—the sunlight of achievement.

I feel assured that all of you are familiar with the details of the Pennsylvania Plan. If not, the other speakers on the program will illumine and clarify it for you. My purported message to you pertains to the national attitude. The Pennsylvania Plan is as yet in an embryonic form, and, therefore, at this time, I can give you only trends and reactions, rather than figures and facts. Were this meeting just a few or several weeks hence, then I believe the latter would be more the complexion of this message.

In brief, the Pennsylvania Plan consists of the approach to, the control of and legislation for, the tuberculosis problem; by organized efforts within the ranks of the medical profession and in their own state and county medical societies. The whole program is to be carried out, as far as possible, under the auspices of the American College of Chest Physicians; of which body it is to constitute one of the major functions. And, what a laudable function it is, and what organization is better equipped for assuming it! There is in no sense any intention not to give full credit to the fine and splendid, the all important activities of the National Tuberculosis Association; for the Pennsylvania Plan or any other program of Tuberculosis control and prevention could not succeed without this

indispensable ally. It is, however, now being rather acutely, realized that the key man, the pivotal point in the whole tuberculosis structure, is the practicing physician. It is by, for and of him that the American College of Chest Physicians exists; and gives promise to flourish and flower down through the years.

To further and promote the Pennsylvania Plan, the College has created the Committee for the Advancement of Tuberculosis Organization in Medicine. Dr. Ralph Matson of Portland, Oregon, and the incoming president of the College, is Chairman of this Committee. The members of this committee, to each of whom are assigned several states in his section of the country, are: Dr. Frank Burge of Philadelphia, Pennsylvania, Dr. Louis Knoepp of Beaumont, Texas, Dr. Fred Meixner of Peoria, Illinois, Dr. Ed Murray of Lexington, Kentucky, Dr. Paul Ringer of Asheville, North Carolina, Dr. Fred Slyfield of Seattle, Washington, Dr. Charles Trembley of Saranac Lake, New York and Dr. William Voorsanger of San Francisco, California. All of these men are now active in this work; the organization's governors in each state are being contacted, and favorable reactions and results from over the whole nation are just now beginning to flow in. Many states at the present time have active tuberculosis committees. On most of them are Fellows of the American College of Chest Physicians; and in many instances they serve as chairmen. The transition here to the Pennsylvania Plan should be relatively easy, if not almost automatic. Many letters from outstanding phthisiologists over the country are in our files, displaying an enthusiasm or keen interest in the plan. Texas has already bodily launched upon a very similar plan, under the wise guidance of its helmsman, Dr. R. B. Homan, Senior. So, in conclusion, it would seem that the Pennsylvania Plan is being heralded and welcomed over our nation, and will soon operate as a mighty agency in our age old struggle.

*Resume of paper delivered on the Tuberculosis Day Program of the Pennsylvania State Medical Society, October 6, 1930, Scranton, Pa.

**President, American College of Chest Physicians.

Organization News

Committee on Scientific Programs

The Committee for the Advancement of Scientific Programs on Diseases of the Chest of the American College of Chest Physicians, announces its program for the coming year. Letters have been mailed to the forty nine Governors of the College outlining the following purposes of the committee and the procedure:

"The Committee for the Advancement of Scientific Programs on Chest Diseases of the American College of Chest Physicians desires to stimulate the reading of more papers on chest diseases before the meetings of the County, State, District, and the American Medical Association.

With the above objective in mind, we solicit your co-operation, in so far as possible, to assist the committee in carrying forward this program.

Will you please contact the program committee of your State and County Medical Societies and offer the assistance of this committee in arranging for speakers at their meetings. Wherever possible, we suggest that you recommend local Fellows of the American College of Chest Physicians to the program committees. If you do not have a local man available, please contact the member of the committee nearest to you, and he will be pleased to render as much assistance as possible.

Kindly notify the Editorial Offices of our monthly Journal, Diseases of the Chest, concerning arrangements made for speakers; so that we may list them and give the meetings some publicity in the columns of the journal. Whenever possible, the Editorial Board of Diseases of the Chest, will be pleased to publish the papers delivered at these meetings."

Submitted to the Governors of the American College of Chest Physicians by:

Ralph C. Matson, M.D. Chairman Portland, Oregon	John Alexander, M.D. Vice-Chairman Ann Arbor, Michigan
---	--

W. C. Breidenbach, M.D. Dayton, Ohio	James S. Edlin, M.D. New York, N. Y.
---	---

Jerome Head, M.D. Chicago, Illinois	Fred G. Holmes, M.D. Phoenix, Arizona
--	--

Harold G. Trimble, M.D. Oakland, California	Wm. D. Tewksbury, M.D. Washington, D. C.
--	---

The members of the Committee for the advancement of Scientific Programs on Diseases of the Chest will assist the Governors of the following states in putting the program into effect:

John Alexander, M.D.	Jerome R. Head, M.D.
----------------------	----------------------

Michigan	Illinois
Wisconsin	Indiana
Minnesota	Missouri
Nebraska	Iowa
Pennsylvania	Kansas
New Jersey	Arkansas

James S. Edlin, M.D.

New York
Connecticut
Rhode Island
Massachusetts
New Hampshire
Vermont
Maine

Fred G. Holmes, M.D.

Arizona
New Mexico
Texas
Colorado
Utah
Oklahoma
Louisiana

Harold G. Trimble, M.D.

California
Oregon
Washington
Montana
Idaho

Wm. D. Tewksbury, M.D.

District of Columbia
Delaware
Maryland
Virginia
North Carolina
South Carolina
Georgia
Florida

W. C. Breidenbach, M.D.

Ohio
West Virginia
Tennessee
Mississippi
Kentucky
Alabama

Ralph C. Matson, M.D.

U. S. Possessions
Mexico

Committee on Nominations

Dr. Champ H. Holmes, President of the American College of Chest Physicians, announces the appointment of the following committee for the nominating of newly elected officers whose terms of office will expire in 1939:

Dr. Frank Walton Burge, Philadelphia, Pa.
Chairman.

Dr. Edward W. Hayes, Monrovia, California
Vice-Chairman

Dr. Dean Cole, Richmond, Virginia

Dr. Charles Hartwell Cocke, Asheville, N. C.

Dr. Goerge Foster Herben, Yonkers, N. Y.

Dr. H. I. Spector, St. Louis, Missouri

Dr. Harry Warren, San Francisco, Calif.

Fifth Annual Meeting

The American College of Chest Physicians will hold its Fifth Annual Meeting at St. Louis, May 13-14, 1939. The following committees are in charge of the arrangements:

Committee on General Arrangements

Dr. James L. Mudd, St. Louis, *Chairman*
Dr. Jesse E. Douglass, Webb City
Dr. Alfred Goldman, St. Louis
Dr. Sam H. Snyder, Kansas City

Committee on Scientific Programs

Dr. H. I. Spector, St. Louis, *Chairman*
Dr. Wm. W. Buckingham, Kansas City
Dr. Elmer E. Glenn, Springfield
Dr. Lawrence D. Schlenker, St. Louis

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MEDICAL DIRECTOR

Committee on Entertainment

Dr. Andrew C. Henske, St. Louis, *Chairman*
 Dr. Louis C. Boisliniere, St. Louis
 Dr. William G. Gunn, Versailles
 Dr. Herbert L. Mantz, Kansas City

The committees are at work on arrangements for the meeting and their progress will be published in these columns from time to time. Watch the Organization News columns for further developments.

Elected President of Tuberculosis Conference

Dr. H. I. Spector, St. Louis, Missouri, Governor of the American College of Chest Physicians for the State of Missouri; was elected president of the Mississippi Valley Conference on Tuberculosis at the annual meeting of the conference held on September 23rd. On September 16th, Dr. Spector was the guest speaker before the annual meeting of the Kansas State Tuberculosis and Health Society. He spoke on the subject of "Eradication of Tuberculosis." On September 22nd, he spoke before the joint meeting of the Mississippi Valley Conference on Tuberculosis and the Mississippi Valley Sanatorium Association on the subject, "Marital Tuberculosis"; and on September 23rd, he read a paper on "Interpreting Symptoms and Diagnosis of Tuberculosis to the Every Day Citizens" before the Mississippi Valley Conference on Tuberculosis.

Governor for Mexico Reports

Dr. Donato G. Alarcón, Mexico City, Mexico, Governor of the American College of Chest Physicians for Mexico; sends us the following communication: "A Postgraduate course on Pulmonary Tuberculosis was given during September at the Tuberculosis Sanatorium of the Public Welfare at Mexico City. Forty five physicians of the Republic attended the Sessions. Subjects pertaining to the various phases of tuberculosis were presented. The main features this year were the new techniques on thoracoplasty, extrapleural pneumothorax, and pneumoperitoneum. All of the procedures were practically demonstrated."

Governor for Vermont

Dr. Roscoe E. Avery, Barre, Vermont, has been appointed as a Governor of the American College of Chest Physicians for the State of Vermont. He will serve for one year.

SOCIETY NEWS

Dr. Francis M. Pottenger, Sr., Monrovia, California, Fellow of the American College of Chest Physicians, was the guest speaker before the annual meeting of the Santa Clara County Tuberculosis Association, at San Jose, California.

Dr. Victor S. Randolph, Phoenix, Arizona, Regent of the American College of Chest Physicians; delivered a paper before the Third Harlow Brooks Navajo Memorial Clinical Conference held at Ganado, Arizona, August 29-31. The title of Dr. Randolph's paper was, "Bronchography in Diagnosis of Pulmonary Disease".

Dr. James A. Redfearn, Albany, Georgia, Fellow of the American College of Chest Physicians; was on the program of the Tri-County Medical Society, composed of Calhoun, Early, and Miller Counties, held at Dorday's Mill, Georgia, August 18th. Dr. Redfearn discussed "Heart Disease".

Dr. Leo W. Bortree, Colorado Springs, Colorado; Fellow of the American College of Chest Physicians was inducted into office as the president of the Colorado State Medical Society, at the annual meeting of the society held at Estes Park, Colorado, September 8, 1938. Dr. Bortree's presidential address was concerned with, "Present Day Problems of the Medical Profession."

Dr. John B. Crouch, Colorado Springs, Colorado; Fellow of the American College of Chest Physicians, was named as the Chairman of the Committee on Tuberculosis Control of the Colorado State Medical Society. Dr. Arnold Minnig, Denver, Colorado, Fellow of the American College of Chest Physicians has been designated as a member of the committee.

Dr. John H. Peck, Oakdale, Iowa, Governor of the American College of Chest Physicians for the State of Iowa; was a guest speaker at the Postgraduate Course given at the Warden Hotel, Fort Dodge, Iowa, under the auspices of the Speakers Bureau of the Iowa State Medical Society, on October 18th. Dr. Peck spoke on "Medical Treatment of Non-Tuberculous Diseases of the Lungs". *Society News*

Dr. L. D. Phillips, Marshallton, Delaware, Governor of the American College of Chest Physicians for the state of Delaware; was on the program of the annual meeting of the Delaware State Medical Society, held at Wilmington, Delaware, on October 11-12. Dr. Phillips discussed a paper presented by Dr. David A. Cooper of Philadelphia entitled, "The Indications for Surgery in the Treatment of Pulmonary Tuberculosis".

Dr. Charles J. Kaufman, Denver, Colorado, Governor of the American College of Chest Physicians for the State of Colorado; was on the program of the Rocky Mountain Tuberculosis Conference held at Salt Lake City, Utah, October 7-8. The title of Dr. Kaufman's paper was, "Vocational Therapy in the Management of Pulmonary Tuberculosis."

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THE MEETING OF SOUTHERN TUBERCULOSIS
CONFERENCE (Continued from page 17).

man's informal talk on "Some Historical Aspects of Tuberculosis", showing as it did a profound knowledge of the subject and a familiarity with ancient traditions and mythology, both Greek and Roman, and with philosophy from Plato to Bergson, a philosophy which was handled with a delightfully light, and at times humorous, touch, but which when applied to the subject in hand showed what a tremendous in-

fluence tuberculosis has had on the course of empire.

Emphasis upon these three presentations is not made in any sense to disparage many others which were of great excellence; but having been asked to give his idea of the high lights of the meeting, the writer was compelled to choose those that remained most strikingly fixed in his mind. All in all, the meeting was considered a great success; and all who attended it are looking forward to the next gathering, which will be in Charleston, South Carolina in September, 1939.

In Memoriam

RICHARD HAYWARD MORGAN, M. D.

1881—1938

DR. RICHARD HAYWARD MORGAN of Detroit, Fellow of The American College of Chest Physicians, died at his home on Wing Lake Road, Sunday morning, July 10, 1938.

Dr. Morgan was born in Albert Lea, Minnesota, June 28, 1881, the son of Darius F. Morgan and Ella Hayward Morgan. He received his early education in the public schools of Minneapolis, Minnesota, and graduated in Medicine from the University of Michigan in 1908. Following his graduation, he entered private practice in Detroit, remaining there until 1910. From 1910 to 1912 he was resident physician at Castle Springs Sanitarium in Arizona, and from 1912 to 1917 he was on the medical staff of the Equitable Life Assurance Co. in Chicago, Illinois.

Serving on the staff of Mount McGregor Sanitarium, New York, for ten years, he specialized in diseases of the chest, until in 1927 he was invited to Detroit by the City Board of Health. He assumed the Extramural Consultation Service in Tuberculosis at Herman Kiefer Hospital, and was on the visiting staff of Harper Hospital and the Detroit Tuberculosis Sanitarium, in addition to his private practice. He was a member of the Wayne County and Michigan State Medical So-

cieties, the American Medical Association, the National Tuberculosis Society, and was a former president of the Trudeau Society of Michigan.

He was married to Eleanor Gillet of Bay City, Michigan, who always interested herself warmly and sympathetically in his pursuits and pleasures.

His fine medical skill which was human and generous endeared him to a host of friends and patients. Sincerity, integrity, open-mindedness, kindness, and a keen sense of humor were Richard Morgan's outstanding qualities in private life as well as in the discharge of his professional duties and obligations. He will long be remembered for the charm of his sympathetic nature, by which he was pre-eminently successful in cheering, encouraging and comforting, not only his patients, but their families and friends as well. To have known Richard Morgan was to have loved him.

He was a true devotee of Nature, fully aware of the treasure of beauty in its bosom. Many expressions of his love for birds and flowers were witnessed in and around his home in the country. Until the last he did not lose the art of joy and humble life.

—DETROIT MEDICAL NEWS

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All methods of collapse therapy aim at this result.

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ALLENWOOD, PENNSYLVANIA

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